



MATERIAL SAFETY DATA SHEET

HILL BROTHERS CHEMICAL COMPANY
15017 E. Clark Ave., City of Industry, California 91745 / (213) 333-2251

SECTION I

CHEMICAL NAME:

Ammonium Hydroxide

CHEMICAL FAMILY:

Inorganic Bases

SYNONYMS:

TRADE NAME:

Aqua Ammonia

FORMULA:

NH₄OH

ORANGE COUNTY CHEMICAL CO.

(714) Industrial Chemicals

546-9901

1230 E. ST. GERTRUDE

SANTA ANA, CALIFORNIA 92707

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS NFPA 704M			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS Aqua Ammonia 24.5% NH ₃		
OTHERS			Aqua Ammonia 29.44% NH ₃ *Ammonia Vapor		50*ppm
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TVL (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F)	Decomposes	SPECIFIC GRAVITY (H ₂ O=1)	29.4% 24.5%	0.8974 0.9121
VAPOR PRESSURE (mm Hg.)	@50% 7.4 psia 25% 4.8 psia	PERCENT, VOLATILE BY VOLUME (%)		
VAPOR DENSITY (AIR=1) (ammonia vapor)	0.6	EVAPORATION RATE (_____=1)		
SOLUBILITY IN WATER	Soluble			
APPEARANCE AND ODOR	Colorless liquid - pungent			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	LeI	UeI
None		16	
EXTINGUISHING MEDIA			
Non-Flammable under usual conditions			
SPECIAL FIRE FIGHTING PROCEDURES			
Refer to manufacturing chemical safety data sheet SD-13 section 6.2			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

SECTION V - HEALTH HAZARD DATA**THRESHOLD LIMIT VALUE**

50ppm (ammonia vapor) see anhydrous ammonia

EFFECTS OF OVEREXPOSURE

Irritation of eyes, upper respiratory tract and skin.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Remove to fresh air, apply artificial respiration, get medical attention.

Eye Contact: Flush with water for at least 15 minutes, get medical attention.

Skin Contact: Flush with water. Ingestion: Get medical attention.

SECTION VI - REACTIVITY DATA**STABILITY**

UNSTABLE

CONDITIONS TO AVOID

STABLE

X

INCOMPATIBILITY (Materials to avoid)

Corrodes copper, and copper alloys.

HAZARDOUS DECOMPOSITION PRODUCTS**HAZARDOUS
POLYMERIZATION**

MAY OCCUR

CONDITIONS TO AVOID

WILL NOT OCCUR

X

SECTION VII - SPILL OR LEAK PROCEDURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Flush with plenty of water.

WASTE DISPOSAL METHOD

Flush with plenty of water.

DISPOSAL MUST CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS

SECTION VIII - SPECIAL PROTECTION INFORMATION**RESPIRATORY PROTECTION (Specify type)**

Chemical cartridge respirator, cannister mask, self contained breathing apparatus, etc.

VENTILATION to LOCAL EXHAUST

keep NH₃

below 50 ppm

SPECIAL

MECHANICAL (General)

See MCSDS, SD-13 section 6.2

OTHER

PROTECTIVE GLOVES

Rubber

EYE PROTECTION

Gas tight goggles

OTHER PROTECTIVE EQUIPMENT

Cotton clothing and rubber aprons are recommended. Chem safety data sheet SD-13 section 8.3.4

SECTION IX - SPECIAL PRECAUTIONS**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

Refer to Manufacturing Chemists Association, chemical safety data sheet SD-13

page 5 warning on labels.

OTHER PRECAUTIONS

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.